RTES

The Real Time Embedded Systems Group

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What is it?

- An Interdisciplinary collaboration of five institutions, funded by an ITR grant ($5M for 5 years).
- Experts in
  - Real-time, embedded software and hardware,
  - Reliability applied to general general purpose computers and user applications,
  - System specification, generation and modeling tools.
- A group building the basic infrastructure or framework components necessary to automate fault handling (reporting, archiving, recovery) in a very large processing farm with a wide range of computing needs and CPU types.

Why is it Important?

- The product will
  - Handle basic problems that will occur frequently.
  - Scale properly
  - Be user extendible to capture complex detection and recovery cases
- The product can lead to better or increased
  - Trigger uptime by compensating for problems or predicting them instead of pausing or stopping a run
  - Resource utilization; the trigger will use resources that it needs.
  - The understanding the operating characteristics of the software
  - The ability to debug and diagnose difficult problems
- Standardization of resource monitoring, management, error reporting, and integration of recovery procedures can make operating the system more efficient and make it easier to comprehend and extend.

Lead Software Engineer Role

- Ensure that software will satisfy needs of BTeV
- Communicate the needs of BTeV to RTES
- Aid in identifying the boundaries and defining the interfaces between BTeV groups and RTES
- Aid in defining the interfaces between the RTES components
- Develop the schedule, goals, and requirements of the project
- Run the collaboration meetings

Further Information

- http://www-btev.fnal.gov/public/hep/detector/rtes/
- http://www-cdserver/cd_fnal/cpd/aps/summary
  - Contains a work summary and the ITR proposal